

Gonorrhoea in homosexual men and media coverage of the acquired immune deficiency syndrome in London 1982-3

Although the number of cases of the acquired immune deficiency syndrome in the United Kingdom is still low at 51 (June 1984), there has been considerable media and public interest. Gonorrhoea is one of the most common diseases acquired by homosexual men. It has a short incubation period, and in the absence of routinely collected data on changes in sexual behaviour it serves as a reasonable surrogate index. A decrease of 39% was reported in the number of homosexual men with gonorrhoea in Denver between the beginning of 1982 and 1983.¹ We attempted to assess whether reports of the acquired immune deficiency syndrome in the national newspapers and magazines for homosexual people and on television altered the number of cases of gonorrhoea among homosexual men attending our department.

Methods and results

Patients attending this department are screened for infection with *Neisseria gonorrhoea*. We calculated the rate of gonorrhoea (number of patients with gonorrhoea/total number of patients with and without gonorrhoea) among homosexual and bisexual, and heterosexual, men attending our department from January 1982 to September 1983. The coverage of the acquired immune deficiency syndrome in the national newspapers was assessed from the records of the Hall Carpenter Memorial Archives, a charity that subscribes to an agency that monitors references to homosexuality in national newspapers. Additional information was obtained from magazines published in London for homosexuals, the Haemophilia Society, the Gay Switchboard, and the Terrence Higgins Trust. Measurement was confined to the national newspapers published in London (including the London evening paper but excluding regional, Welsh, and Irish newspapers) and magazines published in London for homosexuals. Two indices were compiled: the number of references to the acquired immune deficiency syndrome and the length in column centimetres of articles. Television programmes broadcast in London were also recorded. Comparison between quarters was carried out using χ^2 analysis.

During the whole of 1982 and the first quarter of 1983 the rate of gonorrhoea among homosexual and bisexual men remained fairly constant (table). In the second and third quarters of 1983, however, there was a reduction. The rates in these two quarters were significantly lower than in any of the preceding quarters ($p < 0.02$). During the study there were no substantial changes in the number of homosexual men seen or the number of homosexual men with other conditions not requiring treatment that might have accounted for the reduced rate of gonorrhoea. There was no decrease in the rate in heterosexual men.

The number of references and column centimetres devoted to the acquired immune deficiency syndrome increased considerably in the second and third quarters of 1983, the same periods in which we observed the lowest rates of gonorrhoea. During these quarters the first front page reports in the national newspapers and six of the seven television programmes giving substantial coverage to the syndrome occurred. Relevant calls received by Gay Switchboard increased from about 900 in the last two quarters of 1982 and the first quarter of 1983 to 1692 and 1422 in the second and third quarters of 1983 respectively.

Comment

The temporal association between the reduction in the rate of gonorrhoea in homosexual men and the extensive increase in the media coverage of the acquired immune deficiency syndrome strongly suggests a link between the two. Homosexuals might reduce the risk of acquiring the syndrome by reducing their number of different

sexual partners, modifying criteria for selecting partners, and changing their preferred sexual activities. This study suggests that such changes may be occurring in London as in the United States.^{2,3}

- 1 Judson FN. Fear of AIDS and gonorrhoea rates in homosexual men. *Lancet* 1983;ii:159-60.
- 2 Golubiatnikov R, Pfister J, Tillotson T. Homosexual promiscuity and the fear of AIDS. *Lancet* 1983;ii:681.
- 3 Schecter MT, Jeffries E, Contance P, et al. Changes in sexual behaviour and fear of AIDS. *Lancet* 1984;i:1293.

(Accepted 30 July 1984)

Academic Department of Genito-Urinary Medicine, Middlesex Hospital Medical School, London W1

I V D WELLER, MD, MRCP, lecturer

D J HINDLEY, BSC, statistician

M W ADLER, MD, FRCP, professor

Hall Carpenter Archives, London W1

J T MELDRUM, secretary

Correspondence to: Dr I V D Weller.

Covert manifestations of child abuse

Child abuse is the non-accidental attack or injury inflicted on children by people caring for them.¹ The characteristic stigmata of such injuries have been identified and referenced for most regions of the body.² We present the first report of three cases of penetrating ear trauma resulting from child abuse.

Case reports

Case 1—A 2 year old girl with bleeding ears was found to have bilateral posterior tears of the tympanic membrane when examined under anaesthesia. The tears subsequently healed, but she was readmitted a further three times within two months for bleeding ears. She was examined under anaesthesia again and found to have lacerations of both posterior meatal walls. The mother subsequently confessed to having caused the injuries with an orange stick. At the age of 11 the mother had been a victim of child abuse when she was forced into an incestuous relationship with her father; four of her siblings had died in mysterious circumstances.

Case 2—A 16 month old boy had had recurrent bleeding from his ears for 10 months, which had resulted in a haemoglobin concentration of 7.4 g/dl. Bilateral perforations and lacerations of the anterior meatal walls were noted on examination under anaesthesia. While he was in hospital his ears bled on five occasions, always when his mother was present. She had been observed to ram a feeding bottle into his mouth, causing a palatal tear, and we suspected that she had deliberately wrenched a transfusion cannula from his arm. She was limited to supervised visits, and no further bleeding occurred. The mother had been deaf as a child and had worn bilateral hearing aids, which she resented.

Case 3—A 10 month old girl was seen 13 times in seven months for a bleeding right ear. At four of the consultations new tears of the tympanic membrane were noted and lacerations were seen on the anterior and posterior meatal walls. A deep burn sustained to her left hand necessitated admission to another hospital for skin grafting. While she was in hospital her right ear bled profusely and she developed gross cerebrospinal otorrhea. On several occasions after mastoid exploration there was considerable loss of blood and cerebrospinal fluid and the ear padding was missing. The ears healed only when dressings that could not be tampered with were applied. After an episode of haematemesis endoscopy was performed. Three deep lacerations were seen in the posterior pharyngeal wall, which were consistent with

Rate of gonorrhoea (number of men infected/total number seen) and media coverage of the acquired immune deficiency syndrome, January 1982 to September 1983

	Rate of gonorrhoea		Media coverage					
	Homosexual and bisexual men	Heterosexual men	National newspapers		Homosexual magazines		Total	
			No of references	Column cm	No of references	Column cm	No of references	Column cm
January-March 1982	242/1462 (16.6%)	103/1634 (6.3%)	0	0	3	70	3	70
April-June 1982	253/1656 (15.3%)	127/1816 (6.9%)	0	0	4	91	4	91
July-September 1982	238/1552 (15.3%)	114/1760 (6.5%)	1	50	9	313	10	363
October-December 1982	187/1356 (13.8%)	104/1631 (6.4%)	1	12	7	335	8	347
January-March 1983	213/1460 (14.6%)	89/1686 (5.3%)	3	149	14	532	17*	681
April-June 1983	161/1529 (10.5%)	119/1700 (7.0%)	77	1920	46	1820	123†	3740
July-September 1983	148/1504 (9.8%)	180/1726 (10.4%)	76	1428	59	1332	135‡	2760

*One television programme. †Two television programmes. ‡General news coverage on television on three occasions and one television programme.

injury produced by an adult fingernail. An open safety pin, which was impacted at the thoracic inlet, was retrieved. A similar incident occurred one month later, but the safety pin had already passed into the stomach and was subsequently voided. The mother was convicted of assault. The child subsequently had a dead ear, with loss of stapes superstructure and a fistula below the facial nerve into the vestibule.

Comment

Early detection of non-accidental injury to children depends on a high index of suspicion and the recognition of specific injuries indicating abuse. Failure to recognise and intervene in such cases may result in the escalation of injury with increasing morbidity and possibly death.³

Spontaneous haemorrhage from the ear may occur after acute otitis media, but this is normally associated with pus. Recurrent bleeding from the ear should be considered as a manifestation of abuse when no satisfactory parental explanation is forthcoming and results of coagulation studies are normal. Laceration of the anterior meatal wall and tears of the pharyngeal wall should especially arouse suspicion as these are sites that are rarely injured accidentally. It is important that these covert injuries are recognised so that the child may be protected from further serious injury.

1 Gil R. In: Helfer RE, Kempe CH, eds. *The battered child*. Chicago: University of Chicago Press, 1968:20.

2 Ellerstein NS, ed. *Child abuse and neglect—a medical reference*. New York: John Wiley, 1981.

3 Cameron YM, Johnson HRM, Camps FE. The battered child syndrome. *Med Sci Law* 1966;6:2-21.

(Accepted 30 July 1984)

Royal National Throat, Nose and Ear Hospital, London WC1X 8DA

A GRACE, FRCS, registrar

M KALINKIEWICZ, MB, BS, senior house officer

A B DRAKE-LEE, FRCS, senior registrar

Correspondence to: Mr A Grace, Addenbrooke's Hospital, Cambridge.

Diurnal variation in nerve conduction, hand volume, and grip strength in the carpal tunnel syndrome

Despite the high incidence of the carpal tunnel syndrome its pathophysiology is poorly understood. The symptoms commonly occur in the early hours of the morning, and the theories for this include redistribution of oedema at night, oedema due to compression of the axillary vein while lying on the affected side, kinking of the median nerve due to abnormal wrist positioning at night, and venous stasis leading to engorgement of synovial vessels.^{1,2} Reversible changes in conduction velocity of the median nerve have been shown with wrist flexion,³ ischaemia,⁴ and after operation to release the nerve.⁵ We carried out a study to see whether diurnal changes occur in the conduction velocity of the median nerve, hand volume, and grip strength in patients with the carpal tunnel syndrome.

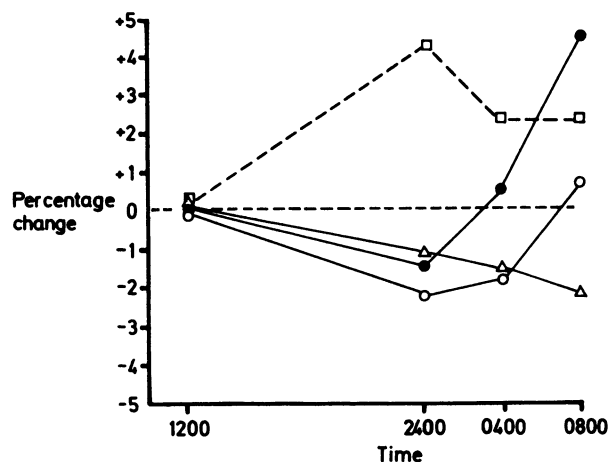
Patients, methods, and results

We studied 32 hands (23 symptomatic, nine asymptomatic) in 16 patients with the carpal tunnel syndrome and five control hands. The patients were admitted to hospital overnight before undergoing routine decompression of the carpal tunnel. Conduction velocity of the median nerve, hand volume, and grip strength were measured on four occasions over 24 hours (at noon, midnight, 4 am, and 8 am). Sensory conduction velocity of the median nerve was measured at 32°C using an electromyograph and expressed as a percentage of the conduction velocity of the ulnar nerve. Hand volume was measured five times on each occasion and was averaged. Grip strength was measured three times on each occasion and the maximal value recorded. The results were analysed by analysis of variance.

All the patients with the carpal tunnel syndrome had symptoms at night. Phalen's test was positive in 16 hands and Tinel's sign occurred in 11 hands. Six patients complained of swelling of the hand at night, but no swelling was visible.

Ten of the symptomatic hands gave a positive result to Phalen's test and showed Tinel's sign: they showed a slowing in conduction in the median nerve at night of 5.62% ($p < 0.05$). Overall, the 23 symptomatic hands showed a slowing of conduction of 2.93% (not significant). The nine asymptomatic

hands and the five control hands showed no significant change in conduction velocity (figure). None of the groups of hands showed any significant change in volume over the 24 hours (the symptomatic hands showed a decrease of 1.8% at midnight and the control hands an increase of 2.55% at 4 am). Grip strength was significantly reduced in all three groups at night ($p < 0.05$)—by 14.3% in the symptomatic hands, 28.6% in the asymptomatic hands, and 17% in the control hands—but there was no significant difference between the groups.



Percentage change in median nerve conduction velocity with time in hands of patients with the carpal tunnel syndrome (○ = symptomatic hands, ● = symptomatic hands giving positive result to Phalen's test and showing Tinel's sign, △ = asymptomatic hands) and in controls (□).

Comment

Evidence suggests that the median nerve may be ischaemic in patients with the carpal tunnel syndrome.⁴ Reversible changes in nerve conduction have been shown to occur.³⁻⁵ The evidence presented here shows that a significant slowing of conduction in the median nerve occurs at night in patients whose symptoms are easily reproducible by local pressure over the median nerve. The nerve in these patients is probably more sensitive to small changes occurring in the carpal tunnel, and this leads to a transient ischaemia of the nerve.

The widely held concept that redistribution of oedema at night produces swelling of the hands and nocturnal symptoms¹ is not supported by our findings. The feeling of swelling often accompanies the other symptoms of pain, paraesthesiae, and numbness and probably reflects altered conduction in the median nerve producing the sensation that the hand is swollen. The absence of demonstrable swelling at night makes the use of diuretics questionable in "idiopathic" carpal tunnel syndrome. Some patients complain of weakness of grip on waking at night. Weakness does occur, but no more so than in normal subjects, and it is probably due to the patient waking at an unaccustomed hour at night.

We thank Professor A K Jeffery for suggesting the study, and Mr P Taylor and Mr G F S Spears for their help. DBM is salaried by the Medical Research Council of New Zealand.

1 Kremer M, Gilliat RW, Golding JSR, Wilson TG. Acroparaesthesiae in the carpal tunnel syndrome. *Lancet* 1953;ii:590-5.

2 Phalen GS. Spontaneous compression of the median nerve at the wrist. *JAMA* 1951;145:1128-33.

3 Schwartz MS, Gordon JA, Swash M. Slowed nerve conduction with wrist flexion in carpal tunnel syndrome. *Ann Neurol* 1980;8:69-71.

4 Fullerton PM, Gilliat RW. The effect of ischaemia on nerve conduction in the carpal tunnel syndrome. *J Neurol Neurosurg Psychiatry* 1963;26:385-97.

5 Hongell A, Mattson HS. Neurographic studies before, after and during surgery for median nerve compression in the carpal tunnel syndrome. *Scandinavian Journal of Plastic and Reconstructive Surgery* 1971;5:103-9.

(Accepted 20 July 1984)

University of Otago Medical School, Dunedin, New Zealand

J WILSON-MACDONALD, FRCS, orthopaedic registrar

M A CAUGHEY, MB, ChB, orthopaedic registrar

Wellcome Medical Research Institute, Dunedin, New Zealand

D B MYERS, PHD, senior research officer

Correspondence to: Mr J Wilson-MacDonald, Department of Orthopaedics, Princess Margaret Hospital, Swindon, Wilts.